

REMARKS

Claims 1-5, 10-17, 22-25, 27-38, 40-42, and 44-66 are pending in this application.

Applicants have amended claims 1-3, 5, 10-16, 22-25, 35, 38, 42, 51, 52, 55, 63, and 66, and have canceled claims 6-9, 18-21, 26, 39, and 43. In addition, Applicants have made a minor change to the specification and have provided a new Abstract of the Disclosure. These changes do not introduce any new matter.

In response to the objection to the specification, Applicants have addressed the issues raised by the Examiner. In particular, Applicants have changed the Title of the Invention to "Control of Distributed Printing Using Data Output Control Module." Next, Applicants have provided a new Abstract of the Disclosure that complies with MPEP § 608.01(b). Finally, Applicants have amended the specification to correct the informality cited by the Examiner. In view of these changes, Applicants respectfully request that the objection to the specification be withdrawn.

Applicants respectfully request reconsideration of the rejection of claims 22-24, 55, and 66 under 35 U.S.C. § 101 as being directed toward non-statutory subject matter. Applicants have amended these claims to include a recording medium in which the program code is recorded. In light of the changes made herein, Applicants respectfully request that the rejection under 35 U.S.C. § 101 be withdrawn.

Applicants respectfully request reconsideration of the rejection of claims 1, 3, 10, 11, 13, 15, 22, and 23 under 35 U.S.C. § 102(b) as being anticipated by *Lobiondo* (U.S. Patent No. 5,287,194). As will be explained in more detail below, the *Lobiondo* reference does not disclose each and every feature of independent claims 1, 3, 10, 11, 13, 15, 22, and 23, as amended herein.

Applicants have amended independent claim 1 to specify the features of the data output control module in more detail. In particular, Applicants have amended independent

claim 1 to specify that the data output control module carries out the distributive output of the print data to the multiple printers in a substantially parallel manner, with each distributive output having a convert process and a transmit process by each page, the convert process converting the print data of each page, sequentially from a head page of each division, to a format suitable for each printer specified as a destination of distribution, and the transmit process transmitting the converted print data.

The *Lobiondo* reference discloses a configuration that distributes a large job among a plurality of printers attached to a network for producing the job. The decentralized printing shown by *Lobiondo* corresponds to that shown in the lower portion of Applicants' Figure 20 (see the process indicated as "Prior Art" in Figure 20). In accordance with this conventional technique, when an application program requires multiple printers to carry out decentralized printing, the application program specifies a certain printer to carry out a printing job and, after the job is produced, the application program then specifies another printer to carry out another print job. These steps are repeatedly carried out for the multiple printers.

In contrast with the conventional technique such as shown in the *Lobiondo* reference, the subject matter defined in amended claim 1 carries out the distributive output of the print data to the multiple printers in a substantially parallel manner, with each distributive output having a convert process and a transmit process by each page, as described above. The *Lobiondo* reference does not carry out the distributive output of the print data to the multiple printers in a substantially parallel manner where each distributive output has a convert process and a transmit process by each page, as claimed. Thus, for at least these reasons, the *Lobiondo* reference does not disclose each and every feature of claim 1, as amended herein.

Applicants have amended independent claim 3 to specify the features of the data output control module and the printer speed performance detection module in more detail. Regarding the printer speed performance detection module, Applicants have amended the

claim to specify that this module collects information with regard to performances of the multiple printers as the destinations of distribution from the printer driver and decides a performance on a printing speed of each of the multiple printers from the collected information of performances of the multiple printers. The *Lobiondo* reference discloses a configuration that considers only the printing speed of each printer to allocate a job to each printer. As such, the *Lobiondo* reference does not disclose each and every feature specified in claim 3, as amended herein.

Independent claims 10, 11, 13, 15, 22, and 23 define methods, computer readable recording medium, and computer program products that correspond to the apparatus defined in either claim 1 or claim 3. Applicants have amended each of claims 10, 11, 13, 15, 22, and 23 in the same manner set forth above regarding claims 1 and 3. Accordingly, Applicants submit that the arguments set forth above regarding claims 1 and 3 also apply to claims 10, 11, 13, 15, 22, and 23.

For at least the foregoing reasons, claims 1, 3, 10, 11, 13, 15, 22, and 23, as amended herein, are patentable under 35 U.S.C. § 102(b) over *Lobiondo*.

Applicants respectfully request reconsideration of the rejection of claims 5, 8, 12, 17, 20, and 24 under 35 U.S.C. § 102(e) as being anticipated by *Shimada* (U.S. Patent No. US 6,654,136 B2) (Applicants note that claims 8 and 20 have been canceled herein). As will be explained in more detail below, the *Shimada* reference does not disclose each and every feature of independent claims 5, 12, 17, and 24, as amended herein.

Applicants have amended independent claim 5 to define a distributed printing control apparatus for printing print data to be printed in multiple sets that includes a setting module, a data allocation module, and a data output control module. The setting module receives instructions from a user and determines whether or not multiple printers should be prohibited from printing one copy or one set of identical pages in accordance with the user's

instructions. When the setting module determines that multiple printers should be prohibited from printing one copy or one set of identical pages in accordance with the user's instructions, the data allocation module allocates the print data to be printed in multiple sets to a single printer, and the data output control module outputs the print data to be printed in multiple sets to the single printer such each copy or each set of identical pages is printed with an identical printer. Support for the changes to claim 5 can be found in Applicants' specification at page 34, line 25, to page 35, line 10, at page 51, line 23, to page 52, line 15, and in Figures 6 and 17.

The *Shimada* reference discloses a configuration that divides print data on a page unit basis and distributes the print data to a plurality of printers for printing (see column 6, lines 50-54). In this configuration, a printer driver makes a single printer print a single copy of print data, out of a plurality of copies, and the rest of the copies of print data are allocated to other printers in the background (see column 6, lines 54-65). The *Shimada* reference does not disclose a setting module having the functionality specified in amended claim 5. Thus, for at least this reason, the *Shimada* reference does not disclose each and every feature of amended claim 5.

Independent claims 12, 17, and 24 define a method, a computer readable recording medium, and a computer program product that correspond to the apparatus defined in claim 5. Applicants have amended each of claims 12, 17, and 24 in the same manner set forth above regarding claim 5. Accordingly, Applicants submit that the arguments set forth above regarding claim 5 also apply to claims 12, 17, and 24.

For at least the foregoing reasons, claims 5, 12, 17, and 24, as amended herein, are patentable under 35 U.S.C. § 102(e) over *Shimada*.

Applicants respectfully request reconsideration of the rejection of claims 2 and 14 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo* in view of

Yacoub (U.S. Patent No. US 6,552,813 B2). Claims 2 and 14 depend from independent claims 1 and 13, respectively. The deficiencies of the *Lobiondo* reference relative to the subject matter defined in amended claims 1 and 13 are discussed above. The *Yacoub* reference does not cure the above-discussed deficiencies of the *Lobiondo* reference relative to the claimed subject matter. Accordingly, claims 2 and 14 are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo* in view of *Yacoub* for at least the reason that these claims depend from claims 1 and 13, respectively.

Applicants respectfully request reconsideration of the rejection of claims 4, 6, 7, 9, 16, 18, 19, and 21 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo* in view of *Shimada* (Applicants note that claims 6, 7, 9, 18, 19, and 21 have been canceled herein). Claims 4 and 16 depend from independent claims 3 and 15, respectively. The deficiencies of the *Lobiondo* reference relative to the subject matter defined in amended claims 3 and 15 are discussed above. The *Shimada* reference does not cure the above-discussed deficiencies of the *Lobiondo* reference relative to the claimed subject matter. Accordingly, claims 4 and 16 are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo* in view of *Shimada* for at least the reason that these claims depend from claims 3 and 15, respectively.

Applicants respectfully request reconsideration of the rejection of claims 25, 26, 30, 34, 38, 39, 42, 43, 47, 51, and 55 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo*, *Shimada*, and *Livingston* (U.S. Patent No. US 6,452,607 B1) (Applicants note that claims 26, 39, and 43 have been canceled herein). As will be explained in more detail below, the combination of *Lobiondo*, *Shimada*, and *Livingston* does not raise a *prima facie* case of obviousness against independent claims 25, 38, 42, and 55, as amended herein.

Applicants have amended independent claim 25 to include the features specified in original claim 26 (in light of the changes to claim 25, Applicants have canceled claim 26). In particular, Applicants have amended claim 25 to recite that that data input restriction module specifies a set of performance information, which includes all the performance information of the respective printers collected by said printer performance information collection module, and restricts the input data in the data input box within a range of the specified set of performance information.

In formulating the obviousness rejection, the Examiner acknowledges that the neither the *Lobiondo* reference nor the *Shimada* reference discloses a data input restriction module as claimed. The Examiner asserts, however, that the *Livingston* reference discloses a data input restriction module as claimed, and that it would have been obvious to one having ordinary skill in the art to incorporate the module shown by *Livingston* into the distributed control printing apparatus taught by the combination of the *Lobiondo* and *Shimada* references. Applicants respectfully traverse the Examiner's characterization of the *Livingston* reference relative to the claimed subject matter, and submit that a suggestion for one having ordinary skill in the art to combine the teachings of the *Livingston* with those of the *Lobiondo* and *Shimada* references is lacking in the prior art.

In support of the obviousness rejection, the Examiner cites column, lines 1-9, of the *Livingston* reference as disclosing the claimed data input restriction module. The cited portion of the *Livingston* reference merely discloses a "Stapler Bin" option that is dimmed so that it is not user selectable. As such, the *Livingston* reference does not disclose a data input restriction module having the functionality specified in claim 25, as amended herein. Thus, even if the references are combined in the manner proposed by the Examiner (a proposition with which Applicants disagree for the reasons set forth below), the combination would not have resulted in an apparatus having all of the features specified in amended claim 25.

Regarding a suggestion to combine the references, the *Livingston* reference discloses a context sensitive user interface help feature, and does not relate in any substantive way to the technical features of a distributed printing control apparatus. Applicants do not see any reason why one having ordinary skill in the art would have been motivated to incorporate a context sensitive user interface help feature into a distributed control printing apparatus. As such, Applicants submit that the requisite suggestion in the prior art to combine the *Lobiondo*, *Shimada*, and *Livingston* references in the manner proposed by the Examiner is lacking.

Thus, for at least the foregoing reasons, the combination of *Lobiondo*, *Shimada*, and *Livingston* does not raise a *prima facie* case of obviousness against claim 25, as amended herein. Independent claims 38, 42, and 55 define a method, a computer readable recording medium, and a computer program product that correspond to the apparatus defined in claim 25. Applicants have amended each of claims 38, 42, and 55 in the same manner set forth above regarding claim 25. Accordingly, Applicants submit that the arguments set forth above regarding claim 25 also apply to claims 38, 42, and 55.

Accordingly, for at least the foregoing reasons, independent claims 25, 38, 42, and 55, as amended herein, are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo*, *Shimada*, and *Livingston*. Claims 30 and 34, each of which depends from claim 25, and claims 47 and 51, each of which ultimately depends from claim 42, are likewise patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo*, *Shimada*, and *Livingston* for at least the same reasons set forth above regarding the applicable independent claim.

Applicants respectfully request reconsideration of the rejection of claims 27-29, 32, 35, 36, 40, 41, 44-46, 49, 52, and 53 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo*, *Shimada*, *Livingston*, and *Snyder et al.* (U.S. Patent No. 5,564,109). Each of the rejected claims depends from one of independent claims 25, 38, and

42. The deficiencies of the combination of the *Lobiondo*, *Shimada*, and *Livingston* references relative to the subject matter defined in amended claims 25, 38, and 42 are discussed above. The *Snyder et al.* reference does not cure the above-discussed deficiencies of the combination of *Lobiondo*, *Shimada*, and *Livingston* relative to the claimed subject matter. Accordingly, claims 27-29, 32, 35, 36, 40, 41, 44-46, 49, 52, and 53 are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo*, *Shimada*, *Livingston*, and *Snyder et al.* for at least the reason that these claims depend from one of independent claims 25, 38, and 42.

Applicants respectfully request reconsideration of the rejection of claims 31 and 48 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo*, *Shimada*, *Livingston*, and *Kumada* (U.S. Patent No. US 6,563,944 B1). Claims 31 and 48 depend from independent claims 25 and 42, respectively. The deficiencies of the combination of the *Lobiondo*, *Shimada*, and *Livingston* references relative to the subject matter defined in amended claims 25 and 42 are discussed above. The *Kumada* reference does not cure the above-discussed deficiencies of the combination of *Lobiondo*, *Shimada*, and *Livingston* relative to the claimed subject matter. Accordingly, claims 31 and 48 are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo*, *Shimada*, *Livingston*, and *Snyder et al.* for at least the reason that these claims depend from independent claims 25 and 42, respectively.

Applicants respectfully request reconsideration of the rejection of claims 33 and 50 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo*, *Shimada*, *Livingston*, *Snyder et al.*, and *Quinion* (U.S. Patent No. 5,978,559). Claims 33 and 50 ultimately depend from independent claims 25 and 42, respectively. The deficiencies of the combination of the *Lobiondo*, *Shimada*, and *Livingston* references relative to the subject matter defined in amended claims 25 and 42 are discussed above. Neither the *Snyder et al.* reference nor the *Quinion* reference cures the above-discussed deficiencies of the combination of *Lobiondo*, *Shimada*, and *Livingston* relative to the claimed subject matter.

Accordingly, claims 33 and 50 are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo*, *Shimada*, *Livingston*, *Snyder et al.*, and *Quinion* for at least the reason that these claims ultimately depend from independent claims 25 and 42, respectively.

Applicants respectfully request reconsideration of the rejection of claims 37 and 54 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lobiondo*, *Shimada*, *Livingston*, and *Yacoub*. Claims 37 and 54 depend from independent claims 25 and 42, respectively. The deficiencies of the combination of the *Lobiondo*, *Shimada*, and *Livingston* references relative to the subject matter defined in amended claims 25 and 42 are discussed above. The *Yacoub* reference does not cure the above-discussed deficiencies of the combination of *Lobiondo*, *Shimada*, and *Livingston* relative to the claimed subject matter. Accordingly, claims 37 and 54 are patentable under 35 U.S.C. § 103(a) over the combination of *Lobiondo*, *Shimada*, *Livingston*, and *Yacoub* for at least the reason that these claims depend from independent claims 25 and 42, respectively.

Applicants respectfully request reconsideration of the rejection of claims 56, 58-60, 62, 63, 65, and 66 under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Yacoub*, *Lobiondo*, and *Kuchta* (U.S. Patent No. 5,805,777). As will be explained in more detail below, the combination of *Yacoub*, *Lobiondo*, and *Kuchta* would not have suggested to one having ordinary skill in the art the subject matter defined in independent claims 56, 60, 63, and 66.

In formulating the obviousness rejection, the Examiner acknowledges that the *Yacoub* and *Lobiondo* references do not disclose the information input module, the printable area computation module, and the area fitting module specified in claim 56. The Examiner asserts, however, that the *Kuchta* reference discloses these features and that it would have been obvious to incorporate such features in the distributed printing control apparatus taught

by the combination of the *Yacoub* and *Lobiondo* references. Applicants respectfully traverse the Examiner's characterization of the *Kuchta* reference relative to the claimed subject matter.

Independent claim 56 defines a distributed printing control apparatus that is configured to compute a printable area in the paper area, which is printable with any of the multiple printers (of different model types), when carrying out the distributive output of the print data to the multiple printers. In contrast, the *Kuchta* reference discloses only the determining of the smallest printable area (see column 33, line 65 to column 34, line 7). Thus, the configuration shown by *Kuchta* is for optimizing a printing area for each printer, and there is no disclosure in the reference regarding the setting of a "common" printable area. As such, Applicants respectfully submit that the *Kuchta* reference does not disclose the features of the information input module, the printable area computation module, and the area fitting module specified in claim 56. Thus, even if the *Yacoub*, *Lobiondo*, and *Kuchta* references are combined in the manner proposed by the Examiner, the combination would not have resulted in an apparatus having all of the features specified in claim 56.

Independent claims 60, 63, and 66 define a method, a computer readable recording medium, and a computer program product that correspond to the apparatus defined in claim 56. Accordingly, Applicants submit that the arguments set forth above regarding claim 56 also apply to claims 60, 63, and 66.

Accordingly, for at least the foregoing reasons, independent claims 56, 60, 63, and 66, as amended herein, are patentable under 35 U.S.C. § 103(a) over the combination of *Yacoub*, *Lobiondo*, and *Kuchta*. Claims 58 and 59, each of which depends from claim 56, and claim 62, which depends from claim 60, are likewise patentable under 35 U.S.C. § 103(a) over the combination of *Yacoub*, *Lobiondo*, and *Kuchta* for at least the same reasons set forth above regarding the applicable independent claim.

Applicants respectfully request reconsideration of the rejection of claims 57, 61, and 64 under 35 U.S.C. § 103(a) as being unpatentable over *Yacoub, Lobiondo, Kuchta*, and *Yamaguchi et al.* (U.S. Patent No. 5,036,476). Claims 57, 61, and 64 depend from claims 56, 60, and 63, respectively. The deficiencies of the combination of the *Yacoub, Lobiondo*, and *Kuchta* references relative to the subject matter defined in amended claims 56, 60, and 63 are discussed above. The *Yamaguchi et al.* reference does not cure the above-discussed deficiencies of the combination of *Yacoub, Lobiondo*, and *Kuchta* relative to the claimed subject matter. Accordingly, claims 57, 61, and 64 are patentable under 35 U.S.C. § 103(a) over the combination of *Yacoub, Lobiondo, Kuchta*, and *Yamaguchi et al.* for at least the reason that these claims depend from independent claims 56, 60, and 63, respectively.

In view of the foregoing, Applicants respectfully request reconsideration and reexamination of claims 1-5, 10-17, 22-25, 27-38, 40-42, and 44-66, as amended herein, and submit that these claims are in condition for allowance. Accordingly, a notice of allowance is respectfully requested. In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 749-6902. If any additional fees are due in connection with the filing of this paper, then the Commissioner is authorized to charge such fees to Deposit Account No. 50-0805 (Order No. MIPFP049).

Respectfully submitted,
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